

Applicants: Siepel et al.
Serial No.: 09/936,621
Filing Date: September 11, 2001
Docket: 294-109 PCT/US
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REMARKS

Applicants have amended Claims 1 and 9, and cancelled Claims 4-8. Claim 12 was previously cancelled. Accordingly, Claims 1-3, 9-11 and 13-15 are pending.

Rejections under 35 U.S.C. § 112 (second paragraph)

The Examiner has rejected Claims 1 and 9 under 35 U.S.C. § 112 (second paragraph) as being indefinite. Applicants have amended these claims to further clarify the invention. No new matter has been added. Accordingly, Applicants request withdrawal of these rejections.

Rejections under 35 U.S.C. § 102(e)

The Examiner has rejected Claims 4-8 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,488,980 (Jeffcoat et al.). Applicants have cancelled Claims 4-8, thereby obviating these rejections.

Rejections under 35 U.S.C. § 103

The Examiner has rejected Claims 1-3, 9-11 and 13-15 as being obvious over U.S. Patent No. 4,409,250 (van Hulle et al.) in view of Jeffcoat et al.

Independent Claim 1 of the present application recites a method of obtaining a heated-expanded foodstuff. The method comprises heating a foodstuff which comprises a non-cereal amylopectin starch to a temperature above the glass transition temperature of the starch. Upon heating, the starch expands. After expansion, the foodstuff is cooled to below the glass transition temperature.

The Examiner states that van Hulle et al. disclose methods for preparing puffed snack products “from gelatinized doughs whose total amylopectin starch content ranges between about 30-95%.” The Examiner concedes that “[v]an Hulle et al. do not disclose the amylopectin starch is non-cereal amylopectin starch...” (See Office Action page 4, first full paragraph.) In an attempt to remedy this deficiency in van Hulle et al., the Examiner states that Jeffcoat et al. disclose cross-linked waxy potato starch.

The Examiner also concedes that van Hulle et al. do not disclose “heating the composition to a temperature above the glass transition temperature...” (See Office Action page 4, first full paragraph.) The Examiner attempts to remedy this deficiency in van Hulle et al. by stating that “the dough in the van Hulle et al. process is heated to gelatinize the dough; thus it is obvious the dough is heated to above the glass transition temperature.” (See Office Action page 4, third full paragraph.)

Applicants respectfully disagree with the Examiner’s analysis. As known by skilled artisans, the gelatinization of starch occurs at a temperature range of about 60-80 °C in water. (The temperature within this range depends on the botanical source of the starch.) At such temperatures, the granule structure of the starch is broken thereby dissolving the starch in

water. In contrast, the glass transition temperature of starch is much higher, typically about 150-300°C. After heating to above the glass transition temperature and subsequent cooling to below that temperature, the starch will be in a glassy phase. Thus, the process of gelatinization disclosed in van Hulle et al. is not equivalent to, nor suggestive of, heating starch to above the glass transition temperature.

In order for a *prima facie* case of obviousness to be made, the cited prior art references must teach or suggest all the claim limitations. Clearly, the cited prior art references do not teach, nor suggest, all the limitations recited in Claim 1. In particular, neither van Hulle et al. nor Jeffcoat et al. teach or suggest heating starch to above the glass transition temperature.

Additionally, in order for a *prima facie* case of obviousness to be made, the cited prior art references must suggest or motivate a skilled artisan to combine/modify the references. There is no motivation for a skilled artisan to combine the teachings of van Hulle et al. with those of Jeffcoat et al. Van Hulle et al. describe a process for preparing a sugary coated snack product consisting of gelatinized cereal amylopectin dough. In contrast, Jeffcoat et al. describe increasing the viscosity of foodstuff by the addition of waxy potato starch. Moreover, even if the two teachings were to be combined, the present invention would not be obtained, as discussed in the previous two paragraphs.

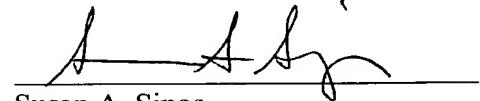
Independent Claim 9 of the present invention recites a heated-expanded foodstuff comprising a non-cereal amylopectin starch. As discussed above, neither van Hulle et al. nor Jeffcoat et al. disclose the preparation of compositions which include heating to above the glass transition temperature of starch. Thus the cited prior art references cannot disclose the heat-expanded non-cereal amylopectin starch foodstuff products recited in Claim 9.

Accordingly, Applicants request that the obvious rejections be withdrawn.

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Applicants respectfully submit that the application, including Claims 1-3, 9-11 and 13-15, are now in proper form for allowance, which action is earnestly solicited. If resolution of any remaining issue is required prior to allowance of this application, it is respectfully requested that the Examiner contact Applicants' undersigned attorney at the telephone number provided below.

Respectfully submitted,



Susan A. Sipos
Registration No.: 43,128
Attorney for Applicants

HOFFMANN & BARON, LLP
6900 Jericho Turnpike
Syosset, New York 11791
(516) 822-3550
SAS

183383